

# Sensor Area Network for Integrated Systems Health Management, Phase II

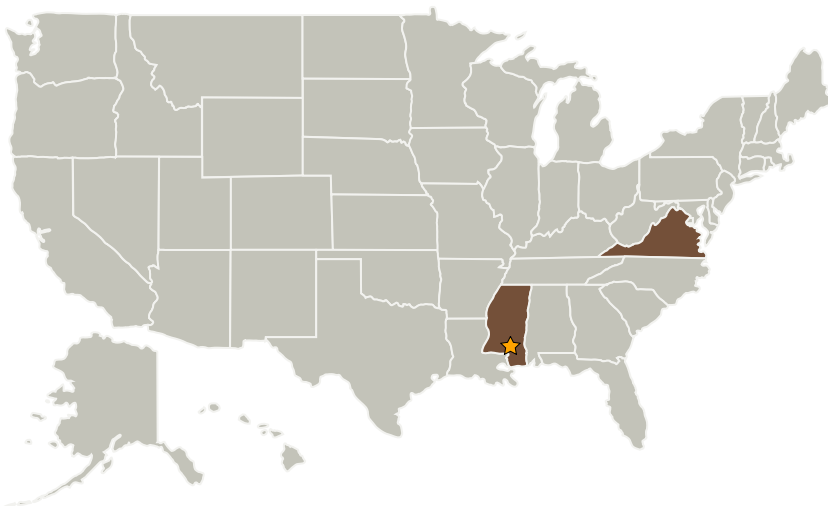
Completed Technology Project (2009 - 2011)



## Project Introduction

The term Integrated Systems Health Management (ISHM) is used to describe a capability that focuses on determining the condition (health) of every element in a complex system (detect anomalies, diagnose causes, prognosis of future anomalies), and provide data, information, and knowledge (DIaK) to control systems for safe and effective operation. Therefore, ISHM capability is achieved by integrating DIaK that can be distributed throughout the system elements. DIaK must be available to any element of a system at right time and within a proper context. The implementations of the ISHM in the past have primarily focused on data access, and have not emphasized the integration of intelligence across all elements that make up a system. In order to distribute DIaK effectively, the integrated system must have the distributed capabilities and they require effective network functions across the whole system. Mobitrum proposes to develop a Sensor Area Network (SAN) for ISHM to bring the distributed intelligences together across all elements within ISHM system. The proposed SAN can be mixed of wireless and wired architecture. In order to implement credible ISHM functions, SAN must provide ISHM with effective communication mechanisms using distributed and/or hierarchical architectures to deliver intelligence across all elements.

## Primary U.S. Work Locations and Key Partners



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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Stennis Space Center (SSC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
Mobitrum Corporation	Supporting Organization	Industry	McLean, Virginia

Primary U.S. Work Locations	
Mississippi	Virginia

## Project Transitions

 **February 2009:** Project Start

 **February 2011:** Closed out

## Project Management

### Program Director:

Jason L Kessler

### Program Manager:

Carlos Torrez

## Technology Areas

### Primary:

- TX09 Entry, Descent, and Landing
  - └ TX09.4 Vehicle Systems
    - └ TX09.4.6 Instrumentation and Health Monitoring for EDL